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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/065,882	11/27/2002	Kevin George Harding	121325-1	5283

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EXAMINER

LAMB, CHRISTOPHER RAY

ART UNIT	PAPER NUMBER
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2656

DATE MAILED: 03/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/065,882	Applicant(s) HARDING, KEVIN GEORGE	
	Examiner Christopher R. Lamb	Art Unit 2656	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 2/15/06.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 5,6,11,12,15,19 and 21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 5,6,11,12,15,19 and 21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claim 21 objected to because of the following informalities:

There is a lack of antecedent basis for "the plurality of recording address access media."

Applicant may wish to include the language of original claim 14 in this claim, or change "wherein the plurality of recording access media comprise media which cause" to "a plurality of recording access media which cause."

Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 5, 6, 11, 12, 15, 19, and 21 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Regarding claims 5 and 11, the subject matter of "reading the set of data in the Nth diffraction order wavefront for a second selected hologram by changing the wavelength of one optical beam with respect to the other" fails to comply with the enablement requirement.

Changing the wavelength of one optical beam is well known in the art. However, using it to select a second selected hologram appears to require “memory access media” which are not sufficiently described in the specification to enable one skilled in the art to which it pertains to make and/or use the invention without undue experimentation.

The relevant portion of the specification appears to be paragraph 27, in which “changing the wavelength of the interfering optical beams 210, 212 different memory address media layers 206 are caused to affect the polarization retardation of the optical beams 210, 212. Thus, by selecting the wavelengths of the beams 210, 212 one selects which memory address media layer 206 changes or shifts the polarization rotation of the optical beams 210, 212.”

The memory access media are thus crucial to select the second selected hologram, but are not further described in the specification to enable one skilled in the art to which it pertains to make and/or use the invention without undue experimentation.

Regarding claims 6 and 12, the subject matter of “reading the set of data in the N^{th} diffraction order wavefront for a second selected hologram by changing the state of polarization of one optical beam with respect to the other” similarly requires the memory access media, which are not described in the specification to enable one skilled in the art to which it pertains to make and/or use the invention without undue experimentation.

Regarding claims 15 and 19, “means for creating an interference pattern between two beams of light at a selected one of the discrete memory locations” similarly requires the memory access media, which are not described in the specification to

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enable one skilled in the art to which it pertains to make and/or use the invention without undue experimentation.

Regarding claim 21, "means for creating an interference pattern between two beams of light at a selected one of the discrete memory locations" and "wherein the plurality of recording address access media comprise media which cause a change in phase of the two beams of light with respect to one another generating thereby non-cross polarized beams of light" similarly requires the memory access media, which are not described in the specification to enable one skilled in the art to which it pertains to make and/or use the invention without undue experimentation.

Note that if the applicant can demonstrate that one skilled in the art could make or use the invention (by, for example, demonstrating that materials with the properties attributed to the "memory access media" are well known to those in the art), this rejection would be withdrawn and these claims would become allowable over the prior art of record.

Conclusion

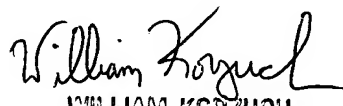
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher R. Lamb whose telephone number is (572) 272-5264. The examiner can normally be reached on 8:30 AM to 6:00 PM Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Korzuch can be reached on (571) 272-7589. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CRL 3/15/06


WILLIAM KORZUCH
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2000